

**REMARKS**

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow. Applicants respectfully request that the foregoing amendments be entered at least because they narrow the issues for appeal.

Claims 1 and 17 are currently being amended. Claims 16 and 32 are being cancelled without prejudice or disclaimer. No new matter is being added.

This amendment changes and deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending the claims as set forth above, claims 1-6, 8-15, 17-31, 33 and 34 are now pending in this application, of which claims 33 and 34 are withdrawn from consideration.

**Improper final rejection**

Applicants note that the finality of the outstanding rejection is improper. At least independent claim 17 was not amended in the last Amendment, and yet the Patent Office introduced a new ground of rejection of claim 17 based on Fisher, as noted below. Accordingly, applicants respectfully request that the Patent Office withdraw the finality of the outstanding Office Action.

**35 U.S.C. § 112, Second Paragraph Rejection**

Claims 1-6 and 8-32 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Specifically, the Patent Office stated on page 2 of the Office Action that claims 1-6 and 8-32 “purport to claim both a product and method of using a product in a single claim.” With respect to the claims appearing to claim a connected and disconnected state in the same claim, applicants submit that the language referred to is functional language which is proper

in an apparatus or device claim. Nevertheless, applicants have further amended independent claims 1 and 17 to remove the language regarding the riser being disconnected.

With respect to the purported “method” steps in the claims of “to be lowered”, “connected,” “submerged and connected,” and “to retract to a protected position”, applicants note that the language referred to is merely functional language, which is proper in an apparatus or device claim. (See MPEP 2173.05(g) “There is nothing inherently wrong with defining some part of an invention in functional terms. Functional language does not, in and of itself, render a claim improper.”)

#### 35 U.S.C. § 112, First Paragraph Rejection

Claims 1-6 and 8-16 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Specifically, the Patent Office stated on page 3, “Claim 1 calls for ‘the separate unit arranged to be movable in transverse direction with respect to the riser’; such language was not recited in the originally filed disclosure and thus constitutes new matter.” Applicants respectfully traverse this rejection.

Applicants submit that the language in claim 1 of “the separate units arranged to be movable in transverse direction with respect to the riser” is supported in the application as originally filed. In particular, applicants refer to Figure 6 which clearly indicates that the inner dimensions of each bucket is larger than the outer diameter of the riser, thus allowing the buckets to move in lateral direction with respect to the riser, as would have been recognized by a person of ordinary skill in the art. Applicants note that drawing may provide written description support, and that there is no requirement that the subject matter of the claims be described literally (See MPEP 2163.02)

#### 35 U.S.C. § 101 Rejection

Claims 1-6 and 8-32 are rejected under 35 U.S.C. § 101. Specifically, the Patent Office stated on page 3 of the Office Action that claims 1-6 and 8-32 “improperly embrace both product or machine and process.” Applicants respectfully traverse this rejection. As

discussed above, claims 1-6 and 8-32 are directed to an apparatus which properly includes functional language. 1-6 and 8-32 are not directed to a process.

Double Patenting Rejection

Claims 17-22 and 24-32 are rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 1-17 of U.S. Patent No. 7,114,885 (hereinafter “the ‘885 patent”). Applicants respectfully request that this rejection be held in abeyance until the claims are otherwise allowable, at which time applicants will file a terminal disclaimer, if appropriate.

Moreover, as just one example of the difference between the present claims and the ‘885 patent, independent claim 17 recites “the protection means being submerged below the vessel and covering at least an upper part of the riser, and terminating above the sea bed.” Thus, the stretching or tensioning means in independent claim 17 would be freely hanging in contrast to the ‘885 patent, which is not provided with a freely hanging stretching means.

Rejections under 35 U.S.C. §§ 102 and 103

Claims 1, 2, 4, 6, 8, 9, 11-14 and 16 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,169,265 (“Butler”). Claims 1, 2, 4, 6, 12, 16, 17, 18, 20, 22, 23, 28 and 32 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 3,813,477 (“Fischer”). Claim 3 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Butler in view of U.S. Patent No. 4,031,919 (hereinafter “Ortloff”). Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Butler in view of U.S. Patent No. 4,782,781 (hereinafter “Poldervaart”). Claims 10 and 15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Butler in view of U.S. Patent No. 2,419,053 (“Bennett”). Claims 3, 5, 8-11, 13-15, 19, 21, 24-27 and 29-31 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Fischer. Applicants respectfully traverse these rejection for at least the following reasons.

Independent claim 1, as amended, recites:

A flexible riser system for a loading system for transferring hydrocarbons between a sea bed installation and a vessel floating at a sea surface, comprising:

a flexible riser; and

protection means configured to protect the riser from impact when the riser is connected to the vessel, *the protection means being submerged below the vessel and covering at least an upper part of the riser and terminating above the sea bed when the riser is submerged and connected to the vessel*, the protecting means being formed of *a plurality of separate units suspended from each other, the separate units arranged to be movable in transverse direction with respect to the riser, the protecting means further being provided with a stretching means or a tensioning means attached to a lower end of the protection means*,

wherein the riser in the vicinity of the stretching or tensioning means is provided with a collar designed to reduce detrimental impact of the stretching or tensioning means on the riser caused by relative movement of the stretching or tensioning means with respect to the riser.

Butler fails to disclose at least the above italicized features of claim 1.

Butler does not disclose as recited in claim 1, “the protection means being submerged below the vessel and covering at least an upper part of the riser and terminating above the sea bed when the riser is submerged and connected to the vessel.” Butler discloses a riser section 14, a riser tensioner system 10, and a plurality of protective jackets 60. While Butler discloses protective jackets 60, the protective jackets are not suspended from a submerged part of the vessel. Butler relates to a fire protection system for an adjustable top joint of a marine riser tensioner system. Such systems are designed for being placed on the platform deck well above the sea level, and the purpose is to protect the upper part against fire and heat, (See col. 1, lines 13-16). The fire protection system of Butler is not submerged below the vessel. Moreover, one skilled in the art would not have modified the Butler system to arrange it below the vessel during operation.

Further, Butler does not disclose “the protecting means further being provided with a stretching means or a tensioning means attached to a lower end of the protection means” where “the protection means . . . terminating above the sea bed.” This feature allows that the protective means is provided with a stretching means arranged at the lower end of the

protection means, suspended from the protective means, thereby keeping the protective means stretched down, and kept in tension. Nowhere does Butler disclose this feature.

Still further, Butler et al does not disclose “a plurality of separate units suspended from each other, the separate units arranged to be movable in transverse direction with respect to the riser.” To the contrary, Butler indicates that its units are screwed on the riser (See column 4, lines 34-49, stating that the top joint 14 is provided with threads 54 in Fig. 1, to aid securing the tensioner ring 36 to the top joint 14, near its mid-portion).

Fisher does not disclose the features of claim 1 of “the protecting means further being provided with a stretching means or a tensioning means attached to a lower end of the protection means” where “the protection means . . . terminating above the sea bed.” As noted above, this feature allows that the protective means is provided with a stretching means arranged at the lower end of the protection means, suspended from the protective means, thereby keeping the protective means stretched down, and kept in tension. Fisher does not disclose a protecting means which only extends partly down to the sea bed, terminated at the lower end by a separate weight or stretching/tensioning means. Rather, Fisher discloses that its pipes 18 and 21 extend all the way to the sea bed 20 (See FIG. 1), and where the pipe 21 is anchored in pipe anchor 22 (col. 3, lines 25-30).

Fisher further does not disclose “wherein the riser in the vicinity of the stretching or tensioning means is provided with a collar designed to reduce detrimental impact of the stretching or tensioning means on the riser caused by relative movement of the stretching or tensioning means with respect to the riser.” Rather, Fisher merely discloses cables 1-7, each including a conductor 11 surrounded by insulation 14 and a fluid impervious sheath 17, where the insulation 14 and sheath 17 are not a collar as recited in claim 1.

Independent claim 17 recites “the protection means being submerged below the vessel and covering at least an upper part of the riser, and terminating above the sea bed, the protection means being formed of a plurality of separate units suspended from each other and a stretching means or a tensioning means arranged at a lower end of the protection means.”

In a similar fashion to claim 1, this feature allows that the protective means is provided with a stretching means arranged at the lower end of the protection means, suspended from the protective means, thereby keeping the protective means stretched down, and kept in tension. As noted above with respect to claim 1, Fisher does not disclose a protecting means which only extends partly down to the sea bed, terminated at the lower end by a separate weight or stretching/tensioning means.

The applied references of Ortloff, Poldervaart and Bennett were cited for disclosing other features of the dependent claims, but fail to cure the deficiencies of Butler and Fisher.

The dependent claims are patentable for at least the same reasons as their respective independent claims, as well as for further patentable features recited therein.

For example, with regards to claims 3 and 19, the Patent Office admits that Fischer is silent about suspending the riser protection means from a turret buoy, but alleges that it would be obvious for a person skilled in the art to modify Fischer by suspending the protection means from the turret buoy. Applicants respectfully disagree. There is no indication in Fischer of the problems related to the need of releasing the riser and the protective means from the floating vessel and to retract the system, i.e. the turret, the riser and the suspended protective means to a depth where such a retracted unit is below the ice prone depth. In fact, Fischer does not at all indicate the existence of such problems or challenges. Hence, it is respectfully submitted that the PTO's analysis is merely based on hindsight.

With regards to claims 5 and 21 it is noted that the lower end of the protective means, i.e. the stretching or tensioning means, is provided with a weight which is freely hanging in the sea. It is this freely hanging weight which is further moored to the sea bed, thereby securing an additional stretch in the protective system. Fischer is silent about the need of providing a stretch in its protective system. The purpose of the Fischer protection is to prevent excessive bending of the cable, i.e., bending which will damage the electrical properties of the cable. This is achieved by introducing a connection or joint between

neighboring pipes which only allows limited tilting of one pipe with respect to the neighboring pipe (See column 2, lines 25-41).

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing or a credit card payment form being unsigned, providing incorrect information resulting in a rejected credit card transaction, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorize payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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